National Institute of Environmental Health Sciences

Diurnal temperature range as a novel risk factor for sudden infant death

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Abstract:

OBJECTIVE: To assess the relationship between diurnal temperature range (DTR) and sudden infant death (SID) between 2001 and 2004 in Shanghai, China. METHODS: We conducted a time-stratified case-crossover analysis to estimate the percent increase of SID associated with changes in DTR after adjustment for daily weather conditions (temperature and relative humidity) and outdoor air pollution. RESULTS: DTR was significantly associated with daily SID. An increase of 1 degrees C in the current-day (L0) and in the 2-day moving average (L01) DTR corresponds to a 1.56% (95% CI: 0.97%, 2.15%) and a 1.89% (95% CI: 1.17%, 2.60%) increase in SID, respectively. CONCLUSION: An increased DTR was associated with an increased risk of SID in Shanghai. More studies are needed to understand the effect of DTR on infant deaths.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Meteorological Factors, Temperature

Air Pollution: Ozone, Particulate Matter, Other Air Pollution

Air Pollution (other): NO2; SO2

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

Urban

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: China

Health Impact:

specification of health effect or disease related to climate change exposure

Morbidity/Mortality, Other Health Impact

Other Health Impact: Sudden Infant Death

Population of Concern: A focus of content

Other Vulnerable Population: Infants

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified